

## **Gifting computers to a poor school in Nepal: Beyond the Bling**

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### **ABSTRACT**

Donating computers to schools in poorer communities with the altruistic hope of bridging some kind of “digital-divide” by providing access to modern technologies may seem commendable. Critics, however, would argue that these actions are ineffective, primarily serving the interests of the donors and may even damage the community. This paper reflects upon this controversy using, as a case study, one charitable project in Nepal that involved the donation of a set of computers to a remote high school that the author has been involved with.

**Keywords:** *Digital divide; technical capital; developing countries; donating computers.*

### **INTRODUCTION**

Raised during the Clinton Gore era as a political issue, the term “digital divide” is widely used to refer to differences in access to information and communication technologies, basically the gap between the “haves” and the “have nots”, with an underlying belief that, “Information tools, such as the personal computer and the Internet, are increasingly critical to economic success and personal advancement” (Irving, Klegar-Levy, Everette, Reynolds, & Lader, 1999, p.viii). The digital divides, or gaps, can be envisaged as being between groups of people within a country, for example between rural and urban dwellers, or between countries, such as the rich versus poor in OECD ranking. The idea still has currency in many parts of the world. For instance, Govindaraju and Mabel observe from India, that:

*The developed countries have been flourishing with the adoption of new information and communication technologies on the one hand, and the developing world has been facing the problem of the increasing digital divide on the other. Those nations that adhered to the outcome and suggestions from technological studies witnessed the economic growth, while the less resourced were deprived of most of their basic rights as they could not survive the new competitive trend (2010, p. 128).*

The digital divide can be viewed as differences between people in, what Yardi refers to as, “technical capital” (2010). Based on Bourdieu’s concept of cultural capital (1986), Yardi defines technical capital as being “the availability of technical resources in a network, and the mobilization of these resources in ways that can positively impact access to information and upward mobility” (2010). People amass technical capital within a social and cultural network, or community, and the argument is that higher levels of technical capital resulting from greater access to technology relate directly to economic growth, diversity and equality. Thus, gifting computers to a poorer community should lead to a rise in technical capital that will eventually lead to social and economic progress.

Many now dismiss the digital divide as a myth and criticize efforts to bridge it as pointless (see Compaine, 2001). Some perceive this as one more way of advancing imperialistic commercial and political interests that really have no relationship to advancing local educational and economic interests apart from lining the pockets of suppliers of ICT products and services, a form of post-colonialism in other words (Tikly, 2004). De Miranda points out, for example, that, “there is

no evidence that ICTs will make any contributions to closing the socio-economic divide". If anything, she argues, "the evidence points in the opposite direction" (2009, p.36 ). Critics argue that the divide is a utopian construct with no relationship to the real world of starvation and poverty, nevertheless learning. Gifting computers can also be harmful from an environmental point of view. Many countries have recently enacted anti-dumping laws to prevent older computer equipment coming in and adding to their toxic waste piles (see Basel Action Network, 2002, Carroll, 2008). In addition to economic and environmental concerns, a key issue with donating computers to schools from an educational perspective, as Warschauer (2002) points out, is that:

*meaningful access to ICT encompasses far more than merely providing computers and Internet connections. Rather, access to ICT is embedded in a complex array of factors encompassing physical, digital, human, and social resources and relationships. Content and language, literacy and education, and community and institutional structures must all be taken into account if meaningful access to new technologies is to be provided (2002, p. 4).*

From these perspectives, it is evident that taking old machines and dumping them into a poor school with the view that the hardware and software will somehow, by itself, revolutionize learning is naïve. As Lloyd Morrisett points out, "No technology in itself will ever eliminate the differences that arise among people who effectively utilize a technology and those who do not" (Compaine, 2001, p. x). This paper critically evaluates a project where computer technology was gifted to a poor school in Nepal with the intention of raising the level of technical capital within the community.

The Children of the Mountain charity (COTM, 2013) is a non-profit organization that builds schools in Nepal. One of their key building projects is situated on a hill in the area of Tandrang, which has two high schools and numerous primary schools. In addition to construction, the charity regularly organizes volunteer visits to the area with people, mostly teachers, coming to help with teacher training and donating modern resources for learning to the schools. This paper discusses a project that involved two volunteer trips to Tandrang in which computer technology was gifted to a community that, up until the time of the visit, lacked any computers. Indeed, the schools did not have any electricity or roads prior to the first visit. Of interest is the value that the technology added, or not, as the critics believe.

## THE CHARITABLE PROJECT

In 2010 the author, who teaches Emirati students at Sharjah Men's College in the UAE, took a group of thirteen IT students to the hill with the idea of providing a lab of computers to one of the high schools, named Sri Sanskrit. The trip coincided with a college wide initiative entitled 'Mosaic 2010: The Spirit of Caring' which was about giving back to communities in need, both locally and overseas, and to gain understanding of less fortunate people. The trip seemed ideal for this purpose, exposing students to a poor community while helping them and also putting their IT skills into practice. The first trip was successful in that a fully functioning computer lab was set up (see Figure One). Evidently the students enjoyed the experience of being embedded in a different culture and applied their IT skills in an authentic context.



**Figure 1:** *Students setting up the first computer lab*

In 2013, a smaller group of five Emirati students returned to the school carrying tools, cabling and a new server. What they found on site after three years was a bit of a disappointment. The computers had been moved to “the library” in a new three level high school building that had been completed by COTM in the interim period of time. A plaque was placed outside the room commemorating the donation but actually it appeared to function primarily as the computer teacher’s office rather than as a student accessible resource. When school students were asked about how often they used the room, most said never with only a few senior students mentioning that they had used them a few times. The computers, many of which did not work, were covered in dust cloths and obviously had not been used for a while. Mice had eaten many of the cables. Only two computers seemed to be used regularly, for word processing and printing using illegal software that had been installed. All had computer viruses and only one had the original image with the learning software that had been installed previously. The school was very proud of the computer lab, however, with many other requests from other schools for the same. Even though it was not used by students much, the computer lab is clearly a status symbol for the school.

We spent four days fixing most of the hardware issues, re-imagining the software and setting up the network, connecting to the new server that we had brought over from the UAE with the new database system tailored for the local Nepalese curriculum installed on route by an NGO based in Kathmandu. A key goal for this trip was to provide better localized content because the previous English based content limited the use of them, according to correspondence received prior to the trip. We had numerous power outages during our days in the lab and did not complete all the

computers having to work sometimes in complete darkness. But we did complete most and the volunteer Emirati students were able to demonstrate the new database system to teachers and the principal of the school who reported that they were pleased about the local Nepali content (see figure two).



**Figure 2:** Students teaching Nepalese teachers about the new database system

The computer lab has benefited the community on Tandrang hill by exposing them to modern technology and opening up the possibilities of using technology for learning purposes. While at the school, I observed teachers and students using the computers to write correspondence and print it without assistance. They would not have been able to do this before. The teachers and students in the school now know what a computer looks like and can use them, albeit in a limited way by modern standards. This was not the case on the first trip when they had never seen a mouse or keyboard before. Students at the school were excited by our visit, lining the walls and windows of the computer room waiting for a turn to use them. The school was very proud to have the computers, being the only one in the area with them.

The benefits to the volunteer Emirati students who provided the computers were also evident from the following comments collected from them at the end of the trip:

*Student1: The thing I have liked most about the trip was the charity work we have done. It was a great deal of enjoyment to me and experience because I always wanted to do such a thing and experience it. I have learned a lot in this trip, one of the best things I have*

leant was to work and interact with other people that I have never met to accomplish the same goal. I have learnt on the field as well stuff that will help me in my course such have wiring, cabling, formatting etc. In my opinion the trip was worthwhile for the community of Nepal because the part we went to the people there may have never touched a computer so the computers would help them much in their school work.

*Student2:* In general, I loved the whole trip. To narrow the most things I liked on this trip I would say camping on the village with a beautiful landscape, being on a lovely group where everyone is friendly and seeing the Nepali community happy because of our visit, were the main things that made this trip successful. I learned a lot from this trip. Most importantly, the way Nepali villagers are living is too tough for us that actually we got amazed by it. For example, a teacher hikes everyday to his school for about 1.5 hrs going to the school and 1.5 hrs coming back!! Our trip was definitely worthwhile for the community of Nepal. Since we accomplished our objective to check all the computers and install a server. Seeing the looks on their faces after we fulfilled our mission was a great sign that we did a great job.

*Student3:* I believe that our work and assistance during this trip to the Nepalese was a great chance for them as a community to improve education level in general. Having 9 computers connected to a server with a Nepalese database is much easier for them to use since it is in their language. As we traveled in a group I learned that time is important (punctuality) is a key thing that reflects how you respect others. Networking was a skill that I practiced day and night in Nepal with my new friends some of who are CEOs, teachers and different sectors of business, education and IT. Another skill that was improved is speaking in English since it was the only understandable language. Nepalese culture, how they greet each other, food and other things that I noticed during this trip. In IT and computers I learned how to make networking cables and practiced formatting, troubleshooting, changing hard drives and installing software on computers.

The benefits from the charities point of view was more guarded, however. The head of COTM, when asked by email, wrote,

*I think both trips have been of genuine value by way of PR and relationship building, but I do have concerns regarding IT programs as part of COTM remit, at least without sustainable and recurring funding (Matthews, 2013).*

Maintaining the computers is a continuing concern. When we left we were not sure how well the new Nepalese system would be used by the school despite on-site training with teachers and with Kathmandu based support being provided via the NGO. Regarding the challenges, the head of the charity added:

*While I am aware that some students get to use the computers on occasion, there is no written curriculum, program or records kept by an IT "Teacher". Computers in a school with erratic power supply is of minimal use, excepting to boost the ego of the teachers. Educational Content and training of an IT teacher in the use of that content is required. An additional maintenance program is necessary. Since the arrival of the computers in Tandrang, all I hear from teachers is ' Computer lab '. It has served to place COTM in the same bracket as trekkers who send donations or hardware without a thought for the longer term. I have battled to suspend that view. It has also caused a great deal of jealousy from other schools (Matthews, 2013).*

These concerns relate directly to Warschauer's observations regarding the need to work in with local customs and political processes (2002). They highlight the complexity of putting into place best practices in a context that is completely new to technology. Local customs and politics dictate much of what is taught on the hill in Tandrang and how. Language is a major issue, for example. The primary written and spoken language on the hill is Nepalese with only a few teachers speaking a smattering of English and so computer software in English is of very limited use. Translators were required to help explain the new computer technology. We hope that the new Nepalese Language database system that was designed to work with the local curriculum and the additional teacher training and support will help with the integration of technology into learning at Sri Sankrit school. For the project to succeed:

- The computers need to be kept functional and reliable.
- Local technical support needs to be readily available.
- Training for teachers on the localized use of the computers for learning is needed.
- Relevant Nepalese Language content for the local curriculum is available and made part of regular learning activities in the school.
- Students need more access to the technology.

None of these points can be addressed by international volunteers nor is this, as the charity head pointed out, "sustainable or desirable" (Matthews, 2013). These are now local concerns. Embedding the technology fully into educational activities on the hill will now require more local support with training eventually leading to taking full ownership. In essence, what we have done with this project has been to get the ball rolling with technology.

## **CONCLUSION**

It is true that some of the criticisms raised in the introduction regarding the donation of computer equipment to poor communities were realized in this project. The computer lab has been limited in the extent to which it has directly improved learning on the hill, it has not improved the local economy and the machines have added some environmental ramifications to the community in terms of electronic waste and electricity usage. However, after three years, the learning community at Sri Sanskrit school now know what modern computer technology is, can use it in a limited way and are proud to have it. The donation of computers has led to an awareness of technology that did not exist before and that shift in perspective has raised what Yardi (2010) terms the "technical capital" of the learning community. As John Mathews, the head of the charity, observes, the computer lab has boosted the status of the school and is a source of envy from other schools in the district (2013). While having limited access, the students on the hill displayed much curiosity about the technology and it is inevitable that with the computer lab now in place that this technical capital will continue to grow over time, particularly once connectivity to a wider community of learners via the Internet is obtained and the technology is better integrated into the local curriculum. This is the logical next step, we believe, although it is now up to the local community to take ownership and implement.



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